

Primary glandular melanoma of male breast with nodal metastasis

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ABSTRACT

Malignant melanoma is a malignancy that develops from melanocytes. Breast is an uncommon site for malignant melanoma. Melanoma of the breast occurs in various situations such as primary melanoma of breast skin, metastatic melanoma of breast, in-transit metastasis to the breast, and primary glandular breast melanoma. Most of the melanoma breast either cutaneous melanoma or metastatic melanoma. Primary glandular melanoma of male breast with nodal involvement is rarely reported compared to primary cutaneous melanoma breast. Here, we report a case of primary glandular melanoma of male breast with nodal metastasis. This case reported to highlight about primary glandular melanoma breast and early diagnosis of melanoma breast.

Key words: Male breast, nodal metastasis, primary glandular melanoma

INTRODUCTION

Malignant melanoma is a tumor arising from melanocytes which is neural crest in origin. Most common site for malignant melanoma is head and neck region followed by lower limb. Other sites for malignant melanoma include eyes, mucocutaneous junction, and paranasal sinuses.^[1] Melanoma arising from the breast is a very rare compared to other sites. Its accounts for < 5% of all types of malignant melanoma.^[2] Melanoma breast either primary or metastatic melanoma. Primary melanoma breast either from the breast skin or breast parenchyma. The melanoma breast can be primary cutaneous melanoma or primary glandular melanoma of breast.^[3] Breast is a rare site for metastasis compared to other sites. The incidence of metastatic tumor in the breast varies from 1.3% to 2.7%. Most common primary malignancy metastasis to the breast was leukemia followed by lung

cancer and melanoma. Melanoma spread to the breast can occur either via lymphatic or hematogenous spread.^[4] Primary melanoma breast can spread to brain, lung, and liver.

CASE REPORT

A 45-year-old male patient presented with complaints of ulceroproliferative growth in the nipple areolar complex of the left breast for 6 months duration, which was gradual in onset and progressive. No history of any other pigmented lesion elsewhere in the body. There was no previous history of excision of mole or melanoma.

Examination of the breast revealed a black color ulceroproliferative growth present in the nipple areolar complex of the left breast. On palpation, a single lump of 4 cm × 2 cm present in the nipple areolar complex [Figure 1]. The mass was hard in consistency and not attached to the underlying surface or pectoral muscle. Multiple mobile axillary lymph nodes were palpable in the left axilla. Contralateral breast and the right axilla found to be normal.

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Figure 1: Black color ulceroproliferative growth present in nipple areolar complex of the left breast, with ulceration

A core needle biopsy of the left breast showed round or oval-shaped cells with large nuclei and abundant cytoplasm. Immunohistochemistry showed cells were positive for S-100 [Figure 2]. Ultrasound examination of both the breast and the axilla showed lump of 4 cm × 3 cm present in the central quadrant near nipple areolar complex, the left breast with multiple axillary lymphadenopathy. Computed tomography of the chest and the abdomen showed no evidence of metastasis. We proceeded with wide local excision with 2 cm clear margin and axillary dissection. An intraoperative finding was pigmented lesion of 4.5 cm × 4 cm present beneath the nipple areolar complex. Mass was not adherent to the underlying structures. Postoperative histopathological examination confirmed malignant melanoma of the breast with 2 out of 15 axillary lymph node positive for metastasis. The patient was followed up for 2 years with no evidence of recurrence.

DISCUSSION

Cutaneous melanoma mostly occurs at sun-exposed areas due to exposure of ultraviolet radiation. Metastatic melanoma breast occurs due to in-transit metastasis or metastasis from elsewhere.^[5] Most of the malignant melanoma breast occurs in the upper and outer quadrant of the breast. This may be an indirect evidence that ultraviolet radiation may be etiology.^[6] Based on the location of melanoma breast we cannot determine whether primary or metastatic melanoma because both occurs in the upper and outer quadrant.

Clinical features of primary glandular melanoma breast are similar to cutaneous malignant melanoma.^[7] However, there are reports where metastatic malignant melanoma presented with features of breast cyst and isolated breast tumors.^[8,9]

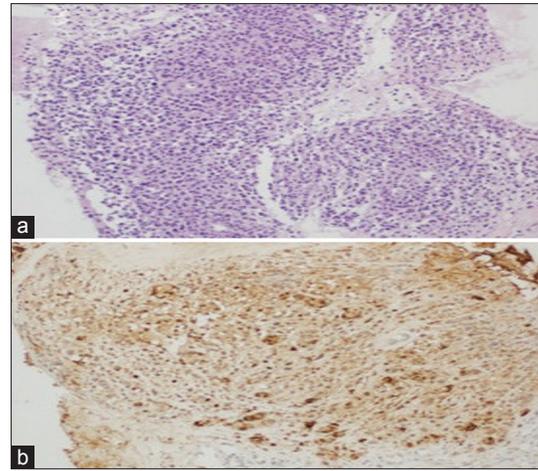


Figure 2: (a) Biopsy of the left breast showed cell of round- or oval-shaped cell with large nuclei and abundant cytoplasm (H and E, ×400). (b) Immunohistochemistry showed tumor cells were positive for S-100 (immunohistochemistry)

It is always mandatory to do ultrasound or mammogram of the breast to identify either primary or metastatic melanoma breast. Confirmation of tissue diagnosis is done with fine needle aspiration cytology or core needle biopsy.^[7] Sometimes, fine needle aspiration fails to prove metastatic melanoma. In that particular situation, immunohistochemistry may yield a proper preoperative diagnosis.^[7] Core needle biopsy shows cell of round- or oval-shaped cell with large nuclei and abundant cytoplasm. Immunohistochemistry demonstrates positive expression of the proteins S-100, HMB-45, and melan-A.^[10] The role of sentinel lymph node biopsy is proven in melanoma breast because it determines the prognosis apart from depth of invasion of the tumor.

Management of the malignant melanoma breast is similar to the management of cutaneous malignant melanoma. Most accepted management is wide local excision with adequate clear margin.^[10] Tumor < 1 mm, 1 cm clear margin is accepted. Tumor > 2 mm, 2 cm clear margin is accepted. Melanoma is mostly spread by lymphatic, so palpable lymph node in melanoma is an indication for lymphadenectomy. Same principle is applicable for malignant melanoma breast. Melanoma breast due to in-transit metastasis or metastatic melanoma is considered as an advanced disease, it should managed with either chemotherapy or immunotherapy.^[11]

CONCLUSION

Primary glandular melanoma breast is a rare entity. Malignant melanoma breast can present with varying presentation. In our case, it was presented as a breast lump. Hence, it should be considered one of the differential diagnoses for the breast lump. Wide local excision is the treatment of choice for primary melanoma breast with axillary lymphadenopathy, because of the prognosis of wide local excision and mastectomy were

same. However, wide local excision carries the advantage of less morbidity with the same curative rate.

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Conflicts of interest

There are no conflicts of interest.

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